

CLAIMS

What is Claimed Is:

1. A process for making glass nail files, said process comprising the steps of:
 - 5 (a) obtaining a substrate comprising a glass material and having a top surface and a bottom surface;
 - (b) chemically etching at least a portion of one of said surfaces to create a rough finish on said surface; and
 - (c) facilitating hardening of said elongated substrate to increase the
10 rigidity and durability of said elongated substrate.
2. A process as recited in claim 1, wherein said step of facilitating hardening comprises:
thermally treating said elongated substrate at at least one predetermined
15 temperature.
3. A process as recited in claim 2, wherein said step of thermally treating comprises:
heating said substrate at a first temperature and then cooling said substrate at
20 a second temperature.
4. A process as recited in claim 1, wherein said step of chemically etching comprises:
soaking said substrate in a solution that facilitates an ionic exchange of ions
25 contained in said glass material with ions released by said solution.
5. A process as recited in claim 4, wherein said solution comprises dissolved salts that facilitate an ionic exchange of ions contained in said glass material with ions released by said solution.

6. A process as recited in claim 4, wherein said solution comprises potassium.

7. A process as recited in claim 1, wherein said solution comprises hydrofluoric acid and facilitates an ionic exchange of ions contained in said glass material with ions released by said solution.

8. A process as recited in claim 1, wherein said grinding surface comprises a substantially uniformly rough finish devoid of sharp edges so as to define a relatively soft grinding surface.

9. A process as recited in claim 4, further comprising the step of:
protecting said substrate from said solution in at least one section where a grinding surface is undesirable.

10. A process as recited in claim 1, further comprising the step of:
forming an elongated substrate comprising said glass material.

11. A process as recited in claim 1, further comprising the step of:
forming a handle from said substrate.

12. A process as recited in claim 11, wherein said handle forming step comprises:
protecting at least one predetermined section of said substrate in a manner that isolates said section from said step of chemically etching.

13. A process as recited in claim 11, wherein said handle forming step comprises:
affixing a rigid sleeve extension to one end of said substrate so as to cover at least a portion of said end.

14. A process as recited in claim 13, wherein said handle forming step further comprises:

providing a removable sleeve that mates with said sleeve extension to substantially conceal said substrate above said sleeve extension.

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15. A process as recited in claim 1, further comprising the step of:
providing a sleeve for removably inserting said substrate to protect said substrate during periods of non-use.

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16. A process as recited in claim 1, further comprising the step of:
forming a pictorial indicia on said substrate.

17. A process as recited in claim 16, wherein said step of forming a pictorial indicia comprises:

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sand blasting said substrate to form said indicia on said substrate.

18. A process as recited in claim 16, wherein said step of forming a pictorial indicia comprises:

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engraving said substrate to form said indicia on said substrate.

19. A process as recited in claim 16, wherein said step of forming a pictorial indicia comprises:

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imprinting said substrate with said indicia to form said indicia on said substrate.

20. A process as recited in claim 16, wherein said step of forming a pictorial indicia comprises:

grinding said substrate to form said indicia on said substrate.

21. A process as recited in claim 1, further comprising the step of:
providing at least one color in said substrate.

22. A process as recited in claim 1, further comprising the step of:
forming a reflective surface on at least one of said surfaces.

23. A process as recited in claim 1, further comprising the step of:
forming a reflective surface on at least one of said surfaces.

24. A process as recited in claim 1, wherein said step of forming a reflective
surface on at least one of said surfaces comprising applying a reflective varnish to said
surface.

25. A glass nail file for filing human and domestic animal nails, said nail file
comprising:

an elongated substrate comprising a glass material, said substrate having a
first surface, a second surface opposite said first surface, a first end, a second end and a
predetermined thickness defined between said first and second surface; and

a virtually permanent grinding surface defined on and by at least a portion of
at least one of said surfaces, said grinding surface defining a rough finish devoid of sharp
edges.

26. A nail file as recited in claim 25, wherein said grinding surfaces is formed by
chemically etching said surface in a solution that facilitates an ionic exchange of ions
contained in said glass material with ions released by said solution. .

27. A nail file as recited in claim 26, wherein said solution comprises dissolved
salts.

28. A nail file as recited in claim 26, wherein said solution comprises hydrofluoric acid.

29. A nail file as recited in claim 25, further comprising:

5 a handle proximal at least one end of said first and second ends.

30. A nail file as recited in claim 29, wherein said handle comprises a smooth section defined by said substrate wherein said smooth section is devoid of a grinding surface.

10 31. A nail file as recited in claim 29, wherein said handle comprises a rigid extension mounted to said end.

32. A nail file as recited in claim 31, further comprising a removable sleeve that mates with said rigid extension.

15 33. A nail file as recited in claim 25, further comprising a sleeve for removably receiving said substrate to at least partially conceal said substrate.

34. A nail file as recited in claim 25, further comprising at least one pictorial
20 indicia disposed proximal at least one end of said first and second ends.